

**Work Order ID 165841**

Thursday, August 31, 2017 10:09:55 AM

Page 1

Item ID: D3512-041

Accept

**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Wearplate

Start Date: 8/31/2017 Start Qty: 6.00

**\*6\***

Cust Item ID:

Required Date: 9/7/2017 Req'd Qty: 6.00

**\*6\***

Customer:

Reference:

Approvals:

Process Plan: W

Date: \_\_\_\_\_

Tooling: \_\_\_\_\_

Date: \_\_\_\_\_

Run Start **\*NR1\***

QC: \_\_\_\_\_

Date: \_\_\_\_\_

SPC (Y/N): \_\_\_\_\_

Date: \_\_\_\_\_

Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|

| Draw Nbr | Revision Nbr |
|----------|--------------|
| D3512    | D            |

110 Weld per dwg A/R Hardcoat S.S. Batch: M130145 0.00**\*110\***

Large Fab

Memo 0.00

Large Fab

2059B HARDCOAT BATCH: M1301456DYK  
17/09/07120 Weld per dwg A/R S.S. rod Batch: M134992 0.00**\*120\***

Large Fab

Memo 0.00

Large Fab

Large Fab

6SEP 13 2017DYK  
17/09/07

130 QC9- Inspect visual per QSI004- Fusion Welds 0.00

**\*130\***

QC

Memo 0.00

Quality Control

6SEP 13 2017DAS  
**24**  
9-89

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**\*165841\***

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Item ID: D3512-041

Accept

**\*N900040100\***

Setup Start

**\*NS1\***

Revision ID:

Stop

**\*NS2\***

Item Name: Wearplate

Start Date: 8/31/2017 Start Qty: 6.00

**\*6\***

Cust Item ID:

Required Date: 9/7/2017 Req'd Qty: 6.00

**\*6\***

Customer:

Reference:

Approvals:

Process Plan: \_\_\_\_\_

Date: \_\_\_\_\_

Tooling: \_\_\_\_\_

Date: \_\_\_\_\_

Run Start

**\*NR1\***

QC: \_\_\_\_\_

Date: \_\_\_\_\_

SPC (Y/N): \_\_\_\_\_

Date: \_\_\_\_\_

Stop

**\*NR2\***Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

140

QC5- Inspect part completeness to step on W/O

0.00

**\*140\***

QC

Memo

0.12

Quality Control

6

SEP 13 2017

DAS  
21  
9-89

142

0.00

**\*142\***

HandFinish

Memo

0.00

Hand Finishing

Coat wearplate with rockguard as per Dwg and note #9  
Batch: 138351

6

DAS  
41  
9-89  
SEP 14 2017

144

QC5- Inspect part completeness to step on W/O

0.00

**\*144\***

QC

Memo

0.12

Quality Control

6

0

SEP 15 2017

DAS  
9  
9-89

**Work Order ID 165841**

Thursday, August 31, 2017 10:09:55 AM

**\*165841\***

Page 3

Item ID: D3512-041 Accept **\*N900040100\*** Setup Start **\*NS1\***  
Revision ID: Stop **\*NS2\***  
Item Name: Wearplate  
Start Date: 8/31/2017 Start Qty: 6.00 **\*6\*** Cust Item ID:  
Required Date: 9/7/2017 Req'd Qty: 6.00 **\*6\*** Customer:  
Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description                          | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|---------------------------------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| 150                            | Identify as per dwg & Stock Location: <b>5160</b> | 0.00                 |         |        |              |               |               |                  |                |
| <b>*150*</b>                   |                                                   |                      |         |        |              | <b>6</b>      |               |                  |                |
| Packaging                      | Memo                                              | 0.06                 |         |        |              |               |               |                  |                |
| Packaging                      |                                                   |                      |         |        |              |               |               |                  |                |
| 160                            | QC21- Final Inspection - Work Order Release       | 0.00                 |         |        |              |               |               |                  |                |
| <b>*160*</b>                   |                                                   |                      |         |        |              |               |               |                  |                |
| QC                             | Memo                                              | 0.60                 |         |        |              |               |               |                  |                |
| Quality Control                |                                                   |                      |         |        |              |               |               |                  |                |

**17/9/19** **17/9/19**

DAS  
21  
9-89

SEP 15 2017

# Picklist Print

Thursday, August 31, 2017 10:09:53 AM

Page 1

Work Order ID: 165841

\*165841\*

Parent Item: D3512-041

\*D3512-041\*

Parent Item Name: Wearplate

Start Date: 8/31/2017

Required Date: 9/7/2017

Start Qty: 6.00

Required Qty: 6.00

Comments: IPP REV:A 13.07.19 NEW ISSUE DD VERF:JLM IPP  
REV:B 13.12.11 ECN13-619/ REV.D DWG DD VERF:JLM

| Component Item ID/<br>Item Name | Replacement<br>Item ID | Mfg/<br>Purch | Bin<br>Item | Primary<br>Location | Last<br>Location | Route<br>Seq ID | Unit of<br>Measure | Qty on<br>Hand | Qty per Kit | Total<br>Qty | Qty<br>Issued | Date<br>Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|

|         |  |              |    |  |  |     |      |        |   |   |  |  |  |
|---------|--|--------------|----|--|--|-----|------|--------|---|---|--|--|--|
| D3512-1 |  | Manufactured | No |  |  | 110 | Each | 6.0000 | 1 | 6 |  |  |  |
|---------|--|--------------|----|--|--|-----|------|--------|---|---|--|--|--|

\*D3512-1\*

Wearplate

\*\*

DYC 17/09/07

| Location | Loc Qty | Loc Code |
|----------|---------|----------|
|----------|---------|----------|

|    |   |  |
|----|---|--|
| FG | 2 |  |
|----|---|--|

|       |   |  |
|-------|---|--|
| 89154 | 2 |  |
|-------|---|--|

|       |   |  |
|-------|---|--|
| WA001 | 3 |  |
|-------|---|--|

|        |   |  |
|--------|---|--|
| 145639 | 3 |  |
|--------|---|--|

|       |   |  |
|-------|---|--|
| WA002 | 1 |  |
|-------|---|--|

|        |   |  |
|--------|---|--|
| 163032 | 1 |  |
|--------|---|--|

|         |  |              |    |  |  |     |      |         |   |   |  |  |  |
|---------|--|--------------|----|--|--|-----|------|---------|---|---|--|--|--|
| D3512-3 |  | Manufactured | No |  |  | 110 | Each | 18.0000 | 1 | 6 |  |  |  |
|---------|--|--------------|----|--|--|-----|------|---------|---|---|--|--|--|

\*D3512-3\*

Spacer

\*\*

DYC 17/09/07

| Location | Loc Qty | Loc Code |
|----------|---------|----------|
|----------|---------|----------|

|       |    |  |
|-------|----|--|
| WA001 | 18 |  |
|-------|----|--|

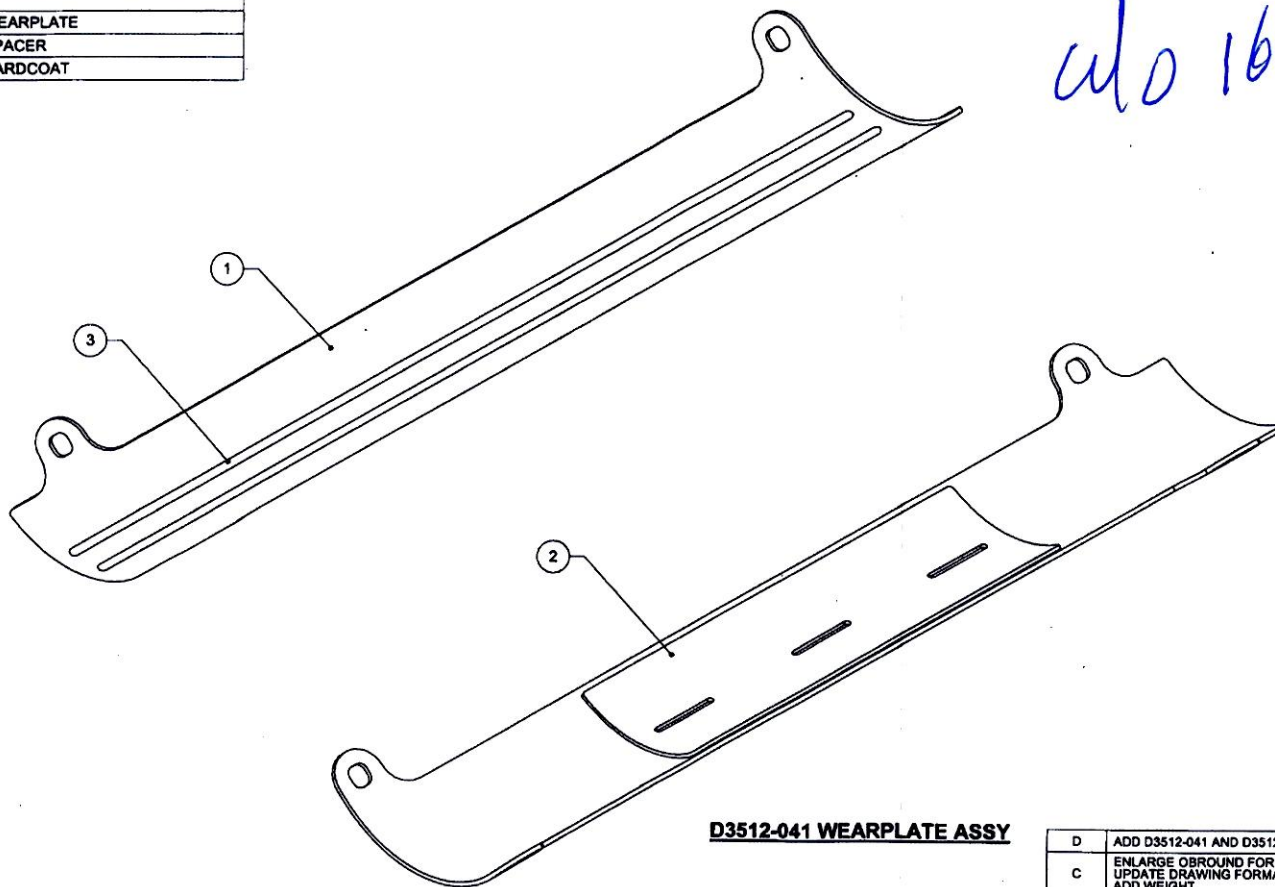
|        |    |  |
|--------|----|--|
| 163294 | 12 |  |
|--------|----|--|

|        |   |  |
|--------|---|--|
| 165205 | 6 |  |
|--------|---|--|

6



| ITEM | QTY<br>-041 | P/N       | DESCRIPTION    |
|------|-------------|-----------|----------------|
|      | X           | D3512-041 | WEARPLATE ASSY |
| 1    | 1           | D3512-1   | WEARPLATE      |
| 2    | 1           | D3512-3   | SPACER         |
| 3    | A/R         | 2059B     | HARDCOAT       |

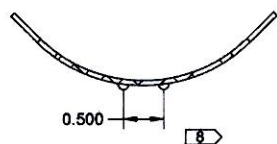
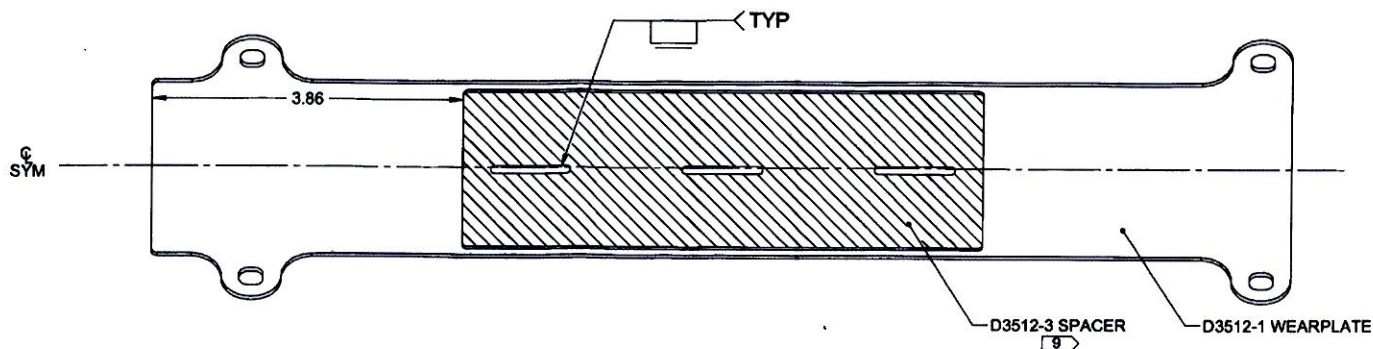


ULO 16584

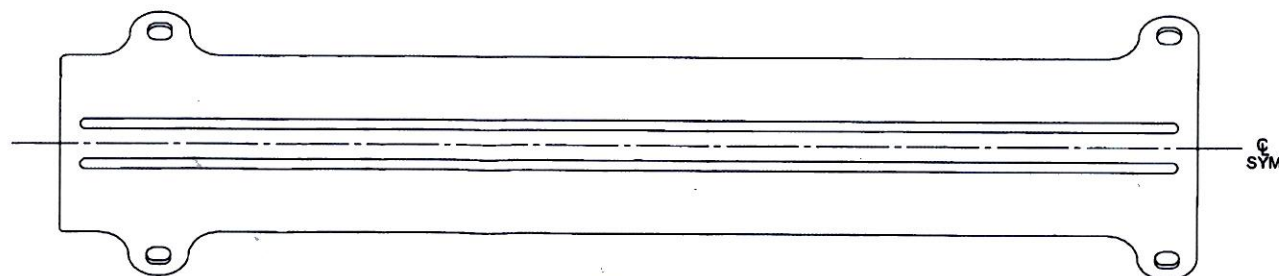
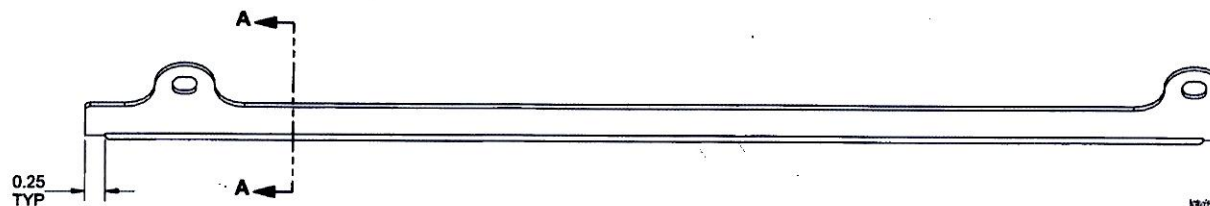
RELEASED  
2013-12-10  
wp

**D3512-041 WEARPLATE ASSY**

|            |                                                                           |                                                                                                                                                                                                                                                                                                     |              |
|------------|---------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| REV.       | DESCRIPTION                                                               | BY                                                                                                                                                                                                                                                                                                  | DATE         |
| D          | ADD D3512-041 AND D3512-3                                                 | DW                                                                                                                                                                                                                                                                                                  | 13.08.28     |
| C          | ENLARGE OBOUND FOR EASIER ASSEMBLY<br>UPDATE DRAWING FORMAT<br>ADD WEIGHT | PH                                                                                                                                                                                                                                                                                                  | 07.10.05     |
| B          | CHANGE MATERIAL TO STAINLESS STEEL                                        | PH                                                                                                                                                                                                                                                                                                  | 06.10.27     |
| A          | NEW ISSUE                                                                 | PH                                                                                                                                                                                                                                                                                                  | 06.04.21     |
| DESIGN     | DW                                                                        | <b>DART AEROSPACE LTD</b><br>HAWKESBURY, ONTARIO, CANADA                                                                                                                                                                                                                                            |              |
| DRAWN      | DW                                                                        |                                                                                                                                                                                                                                                                                                     |              |
| CHECKED    |                                                                           | DRAWING NO.                                                                                                                                                                                                                                                                                         | REV. D       |
| MFG. APPR. |                                                                           | D3512                                                                                                                                                                                                                                                                                               | SHEET 1 OF 4 |
| APPROVED   |                                                                           | TITLE                                                                                                                                                                                                                                                                                               | SCALE        |
| DE APPR.   |                                                                           | WEARPLATE ASSY                                                                                                                                                                                                                                                                                      | NTS          |
| DATE       | 13.08.28                                                                  | <small>COPYRIGHT © 2013 BY DART AEROSPACE LTD<br/> THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS<br/> NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT<br/> WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small> |              |



**SECTION A-A**  
**SCALE 1:1.5**



**D3512-041 WEARPLATE ASSY**

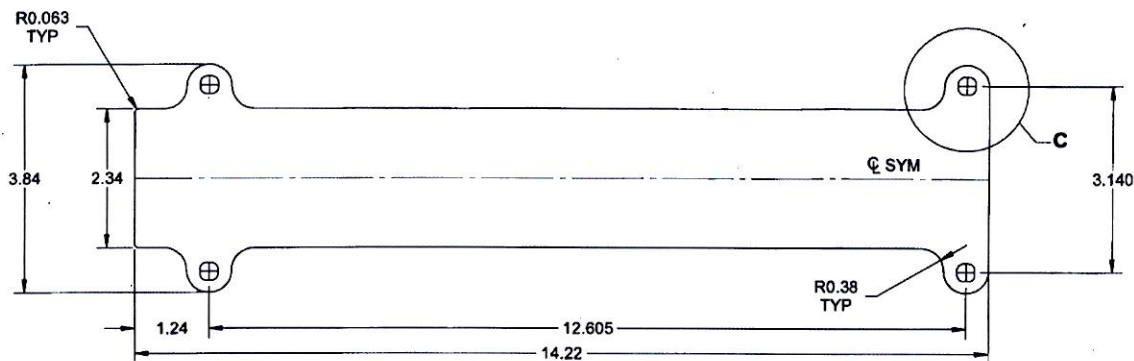
**NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3512-041" USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 0.94 lbs
- 8) WELDING: PER QSI 004, 2059B HARDCOAT WELD 0.063 TO 0.125 THK
- 9) COAT HATCHED (CONCAVE) SURFACE WITH PLUS ONE ROCKGUARD 4714, 0.020-0.040 THK

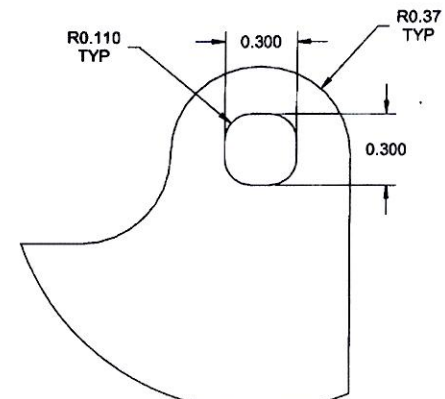
**RELEASED**  
2013-12-10

*MP*

|            |                    |                                                                                                                                                                                                                                                                                                  |              |
|------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| DESIGN     | DW                 | <b>DART AEROSPACE LTD</b>                                                                                                                                                                                                                                                                        |              |
| DRAWN      | DW                 | HAWKESBURY, ONTARIO, CANADA                                                                                                                                                                                                                                                                      |              |
| CHECKED    | <i>UP</i>          | DRAWING NO.                                                                                                                                                                                                                                                                                      | REV. D       |
| MFG. APPR. | <i>[Signature]</i> | <b>D3512</b>                                                                                                                                                                                                                                                                                     | SHEET 2 OF 4 |
| APPROVED   | <i>[Signature]</i> | TITLE                                                                                                                                                                                                                                                                                            | SCALE        |
| DE APPR.   | <i>[Signature]</i> | <b>WEARPLATE ASSY</b>                                                                                                                                                                                                                                                                            | NTS          |
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**D3512-1F**



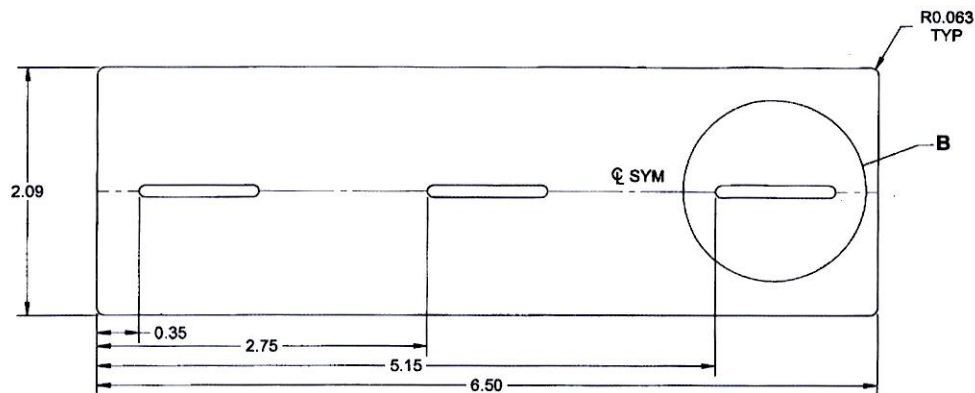
**DETAIL C**  
SCALE 2X

**NOTES:**

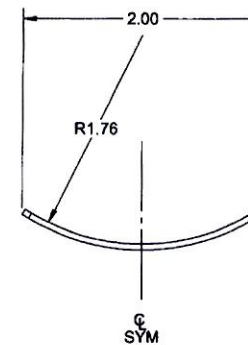
- 1) MATERIAL: AISI 304/316 STAINLESS STEEL PER MIL-S-5059 OR AMS 5513 OR 5524 OR ASTM A240  
18 GAUGE 0.063 THICK (REF DART SPEC. MS304S16GA)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.63 lbs

RELEASED  
2013-12-10  
WP

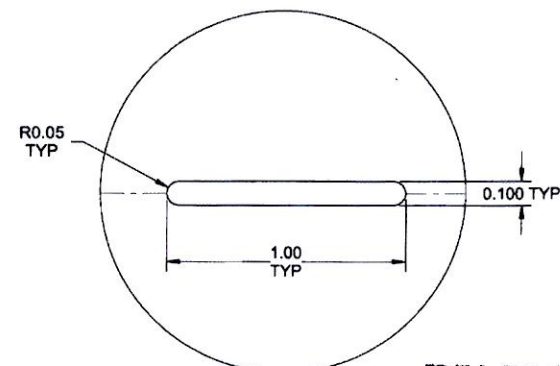
|                                                                                                                                                                                                                                  |           |                                        |              |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|----------------------------------------|--------------|
| DESIGN                                                                                                                                                                                                                           | DW        | <b>DART AEROSPACE LTD</b>              |              |
| DRAWN                                                                                                                                                                                                                            | DW        | HAWKESBURY, ONTARIO, CANADA            |              |
| CHECKED                                                                                                                                                                                                                          | <i>AS</i> | DRAWING NO.                            | REV. D       |
| MFG. APPR.                                                                                                                                                                                                                       | <i>WD</i> | <b>D3512</b>                           | SHEET 3 OF 4 |
| APPROVED                                                                                                                                                                                                                         | <i>WD</i> | TITLE                                  | SCALE        |
| DE APPR.                                                                                                                                                                                                                         | <i>WD</i> | <b>WEARPLATE ASSY</b>                  | NTS          |
| DATE                                                                                                                                                                                                                             | 13.08.28  | COPYRIGHT © 2013 BY DART AEROSPACE LTD |              |
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**D3512-3F FLAT PATTERN**



**D3512-3 SPACER  
MAKE FROM D3512-3F**



**DETAIL B  
SCALE 2X**

**RELEASED**  
2013-12-10  
NO

**NOTES:**

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL PER MIL-S-5059 OR AMS 5513 OR 5524 OR ASTM A240 18 GAUGE 0.050 THICK (REF DART SPEC. MS304S18GA)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.19 lbs

|                                                                                                                                                                                                                               |                                                                                       |                                        |              |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|----------------------------------------|--------------|
| DESIGN                                                                                                                                                                                                                        | DW                                                                                    | <b>DART AEROSPACE LTD</b>              |              |
| DRAWN                                                                                                                                                                                                                         | DW                                                                                    | HAWKESBURY, ONTARIO, CANADA            |              |
| CHECKED                                                                                                                                                                                                                       |  | DRAWING NO.                            | REV. I       |
| MFG. APPR.                                                                                                                                                                                                                    |  | D3512                                  | SHEET 4 OF 4 |
| APPROVED                                                                                                                                                                                                                      |  | TITLE                                  | SCALE        |
| DE APPR.                                                                                                                                                                                                                      |                                                                                       | WEARPLATE ASSY                         | NTS          |
| DATE                                                                                                                                                                                                                          | 13.08.28                                                                              | COPYRIGHT © 2013 BY DART AEROSPACE LTD |              |
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